

REMARKS

Claims 17 – 34 are pending in this application. Claims 17 – 34 are rejected in the present Office Action.

Claims 17 – 31 were rejected as unpatentable under 35 U.S.C. 103(a) over U.S. Patent No. 6,197,874, issued to Irle. Claim 19 has been cancelled. Irle discloses polyurethane-polyacrylate hybrid dispersions used for coating substrates, particularly wood substrates. The polyurethane of Irle is made from an aliphatic or cycloaliphatic polyisocyanate containing allophanate groups. Both components of the polyurethane contain groups to make them more hydrophobic. In contrast to the present invention, there is no disclosure whether or not the polyurethanes have crystallinity and there is no mention of a crystalline phase melting point. The acrylic monomers of Irle comprise 1 – 80 % of the hybrid, while the vinyl monomers of the present invention comprise 50 – 90% of the hybrid. Consequently, Irle's hybrid is predominantly urethane while the hybrid of the present invention is predominantly acrylic. Further, there is no disclosure, teaching or suggestion in Irle to include .5 – 15 wt % of at least one monomer having a nitrile group or up to 10 weight percent of at least one monomer having a functionality of aceto acetoxy, hydroxyl, methylol or a mixture thereof. There is no disclosure, teaching or suggestion in Irle that would lead one skilled in the art to these features. Accordingly, it is respectfully submitted that claims 17, 18 and 20 – 31 are patentable under 35 U.S.C. 103(a) over Irle.

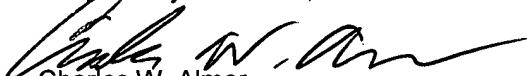
Claims 17 – 34 were rejected as unpatentable under 35 U.S.C. 103(a) over U.S. Patent No. 5,854,332, issued to Swarup. Swarup discloses aqueous dispersions or urethane polymers and vinyl polymers that provide water-based coating compositions with good adhesion following exposure to humid conditions. As with Irle, there is no disclosure, teaching or suggestion in Swarup of a monomer having a nitrile group or at least one monomer having the aceto acetoxy, hydroxyl or methylol functionality. There is no disclosure in Swarup that the polyurethane has crystallinity or a melting point. Further, the composition of Swarup is predominantly urethane while that of the present invention is predominantly acrylic. There is no suggestion whatsoever that the dispersions of Swarup which are compounded with Al containing pigment pastes containing melamine formaldehyde resin and a solvent borne oligomeric ester which are coated on steel panels and then covered with a clear coat would function as an adhesive. Consequently, in addition to the differences set forth above, it is respectfully submitted that one skilled in the art would not have looked to Swarup to form a dispersion such as that of the present invention. Accordingly, it is respectfully submitted that claims 17, 18 and 20 – 34 are patentable under 35 U.S.C. 103(a) over Swarup.

Claims 17 – 31 were rejected as unpatentable under 35 U.S.C. 103(a) over U.S. Patent No. 6,117,936, issued to Kato. Kato discloses an aqueous emulsified polymer dispersion comprising emulsion particles having a multilayer construction. There is no disclosure in Kato that the

polyurethane has crystallinity or a melting point. Further, there is no disclosure, teaching or suggestion of the inclusion of up to 10 weight percent of at least one monomer having a functionality of aceto acetoxy, hydroxyl, methylol or a mixture thereof. As shown in the examples, the dispersion of Kato is primarily concerned with paints. A titania based pigment paste is made and the emulsion polymers are formulated into paints. The paints are then applied to panels coated with a rustproofing primer and tested for water resistance, accelerated aging by weathering, hardness, workability and other features. One skilled in the art would not have looked at the dispersion of Kato to develop an adhesive, especially a heat seal adhesive. Accordingly, it is respectfully submitted that claims 17, 18 and 20 – 31 are patentable under 35 U.S.C. 103(a) over Kato.

In view of the foregoing, it is respectfully submitted that the present application is in condition for allowance. If there are any issues that the Examiner wishes to discuss, she is invited to contact the undersigned attorney at the telephone number set forth below.

Respectfully submitted,



Charles W. Almer
Reg. No. 36,731
Tel. No. 908 707-3738

National Starch and Chemical Company
10 Finderne Avenue
Bridgewater, NJ 08807
June 30, 2004